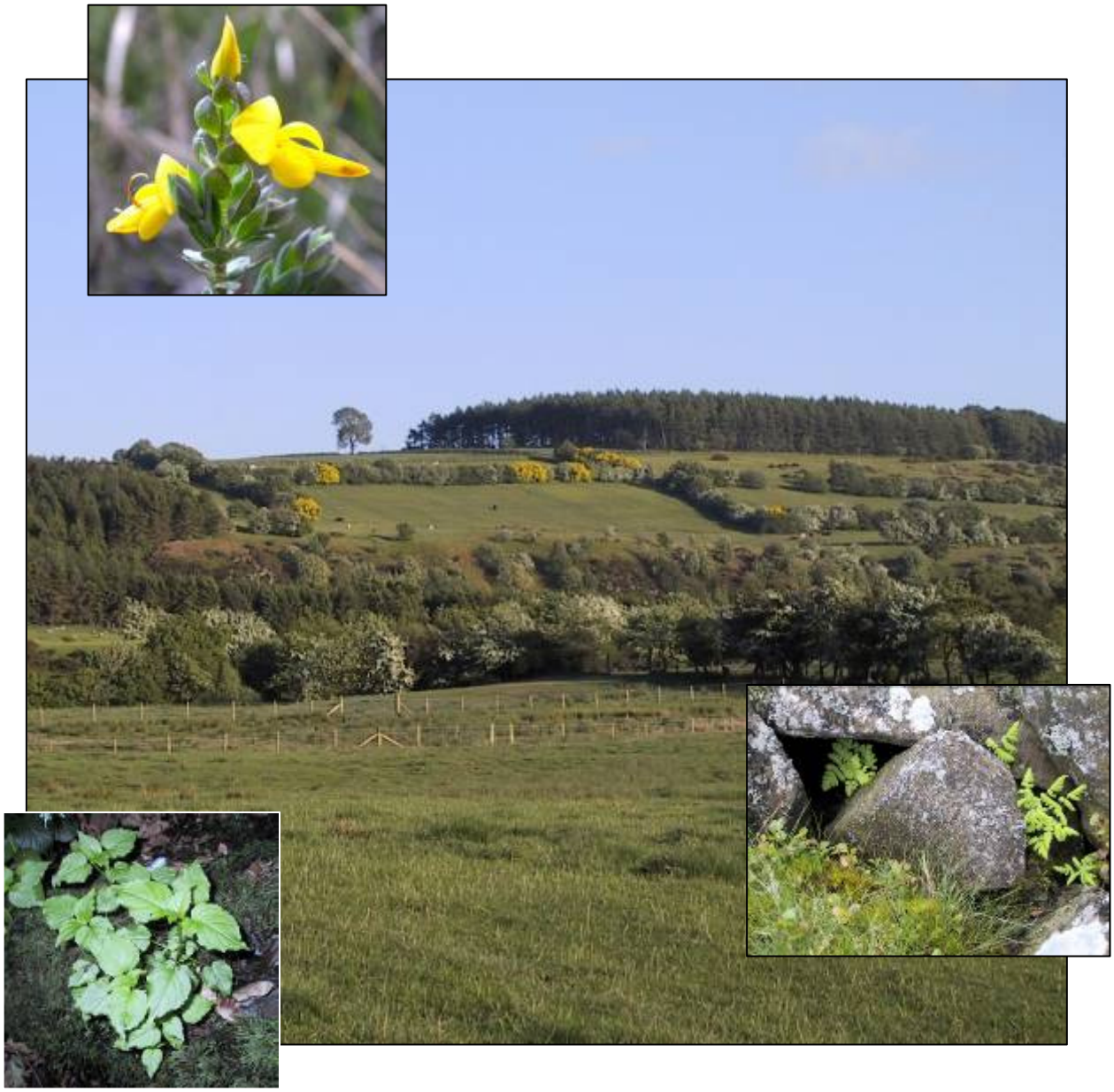
Shropshire Botanical Society

Newsletter

Spring 2007



Main picture: Laburnum hedges on the Stiperstones. Clockwise from top, left: *Genista anglica* (John Bingham), *Gymnocarpium dryopteris* (Alex Lockton), *Circaea* × *intermedia* (Lockton).

Botanical Society of the British Isles

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Spring 2007

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Botanical Society News

Sarah Whild

A shortish newsletter this time, mainly because there are so many interesting projects under way that it is difficult to find the time. Don't forget that members are invited to contribute to the newsletter or join the committee and get more involved. Here are some progress reports.

Field Surveys

The number of records received for 2006 is now up to 12,105, of which 11,464 are of vascular plants. The two main sources of data were the Flora of Haughmond Hill project (1,512 records) and a survey of 39 quarries by Shropshire County Council (4,139 records). The latter was a very interesting initiative organized by Dan Wrench, who attempted to raise the standard of survey undertaken by consultants by asking them to sit a short exam first, to prove their competence. The result was undoubtedly a much higher standard of biological records, and the consultants themselves were asked to present their findings to an invited audience at the end of the project. Among the interesting finds were several new sites for Common Cudweed, *Filago vulgaris*, the rediscovery of Pale St. John's-wort, *Hypericum montanum*, on Llynclys Hill, and confirmation of the old record of Woolly Thistle, *Cirsium eriophorum*, at The Novers. It was not only the botanical records that were enhanced by recruiting more competent surveyors, because the zoological surveys looked very interesting, too. Shropshire County Council deserves our praise for this initiative.

The AGM will be at
2pm on Saturday 24th March 2007
at Preston Montford

Arable Weeds – species of conservation concern or alien invaders?

by Sarah Whild

Last year, work was undertaken by various organizations on Haughmond Hill. Our survey last year revealed many interesting and important plants, and we can only conclude that it is well within the range of suitable sites for SSSI notification. It was indeed once a SSSI but it was never re-notified under the 1979 Wildlife & Countryside Act. Afforestation of much of the hill destroyed the habitat for nightjars, and at that point the old Nature Conservancy Council lost interest. However, our survey shows that much of the botanical interest remains in pockets throughout the site, and it would be a fairly straightforward task to return it to full SSSI status.

The Forestry Commission held a consultation on their management plan for Haughmond Hill at Uffington Village Hall which several members of the Botanical Society attended. We were dismayed to discover that the 'plan' consisted largely of a map of the hill with the NVC communities coloured in. These were, in our opinion, largely incorrect. The intention was to restore deciduous woodland along the southern slopes of the hill, which they believed was ancient woodland (these are among the best areas for species-rich grassland) and to keep the conifers on the plateau, which they thought was of no ecological importance (it is ancient deer park and heathland – both derived from ancient woodland and of high ecological value). We hope they will reconsider their plan and seize the opportunity to recreate some valuable biodiversity habitat at one of the most promising sites for such restoration.

Our Flora of Haughmond Hill is available from the Botanical Society for £5 (incl. p&p) or can be downloaded for free from the web site, www.shropshirebotany.org.uk.

Herbarium Digitization Projects

In the last couple of years we have been able to completely digitize both of the county's main herbarium collections, and this is yielding many valuable old records. Mark Duffell worked for most of 2006 on the Shrewsbury Museum collection (SHY) and created a spreadsheet of 3,633 records from the specimens there. Many of them are high quality records, but some of the taxa (such as charophytes) are still in need of critical determinations.

This year we commissioned Tom Humphrey of the herbaria@home project at Manchester Museum to photograph the Richard Benson collection at Shrewsbury School (SHYB), which turned out to contain 2,787 sheets. It took a week to do, and Andrew Allott and the school authorities were very kind to give us access to the museum during half term to complete the work. The photographs are now on the herbaria@home web site, http://herbariaunited.org/atHome/, where the public (that's you!) is invited to log on and database the information.

Using herbaria@home a lot of voucher specimens can effectively be validated by their images, so you do not need to visit the museum to make use of them. Willows, for example, are largely identified by the shape of their leaves, and this can clearly be seen in the photographs. You can search for the species you want to look at and, if you disagree with the information that has been databased, you can make your own comments. It is, in effect, a virtual herbarium, and the next thing we need is for lots of people to log on and do the digitization process. This is genuine scientific work to which anyone can make a real contribution from the comfort of their own home.

We would like to thank Shropshire Wildlife Trust for supporting the digitization of SHYB and Andrew Allott and Peter Boyd, the curators of SHYB and SHY, for giving us access to their collections. We hope to bring more details about the results in subsequent newsletters.

Meanwhile, at University College, London, Genevieve Madgwick is studying for a PhD by examining the changes in the aquatic flora of the Meres & Mosses over the last 200 years. The project was funded by the English Nature head office in Peterborough, which was under the impression that there was no botanical data relating to the Meres & Mosses. Happily, the UCL team got in touch with us and we were able to supply some 28,000 records – much of it from English Nature's own files. Gen has added new records by searching the herbarium of the Natural History Museum in London and, although these are mostly repeat finds of species in sites we knew about, it does help to provide better details of existing records, so it is all welcome information. If the research yields any interesting findings, we shall hopefully report on them here in future.

Shrewsbury Bypass

The debate about the Shrewsbury North-west Relief Road has been quite lively, as Shropshire County Council has published its proposals. The ecological survey found nothing of any importance along any of the routes, and the consultants made few biological records, but they concluded that it was a pleasant bit of countryside and the road should not be built there. Unfortunately, they thought that the sedge swamp in the Old River Bed was 'marshy grassland' and they failed to consult the Botanical Society about any records we hold for the area. This was clearly a report from the 'bad old days' of the County Council, where a token effort was considered more than enough of a commitment towards environmental protection.

At present it is difficult to evaluate the proposed NWRR in ecological terms. There are some important sites that would be affected by it, including the Old River Bed, the Severn, Hencott Pool and possibly Alkmund Park Pool. In most of these cases, there would be a real potential for some ecological enhancement as a consequence of the road plans. For example, Hencott Pool is almost completely scrubbed over, but could easily be restored if it was made a nature reserve in mitigation for the road construction. As it includes a huge peat-filled basin, there would be very sound environmental arguments for protecting such a significant carbon sink. There are also some implications for botanical conservation, as the route of the bypass includes possibly the only site in the world for the rare and endemic *Fumaria* ×*painteri* – a species that no-one is entirely sure even exists; but it would be embarrassing if it does turn out to be a real species and it is accidentally exterminated by the creation of a road.

The real objection to the NWRR is on landscape grounds, as it cuts through the Berwick Estate and will inevitably lead to the development of this area of open countryside that comes so close to the centre of Shrewsbury. But without public access, and with no competent survey, the only conclusion that ecologists can make is that no-one has undertaken a serious botanical assessment of either the negative or the possible positive effects of the proposed road construction, and the County Council would do well to employ its newly found ecological expertise to conduct a thorough survey and present its findings to an audience that would understand them. Otherwise there will always be suspicions that the ecological appraisal was just a sham.

In 2006, many of you may have participated in the FISQ trials (Field Identification Skills Qualifications) at Preston Montford. These were national trials funded by the BSBI in order to develop a system of quantifying someone's field botany abilities. This year, Sue Townsend and I are running the FISQs for real at Preston Montford, so do get in touch if you are interested in taking one of these – the good news is, you cannot fail - you are allocated a level of skill. Details of dates are in the field meetings list – there is a charge, though.

Finally, don't forget to send in more records and DO send in records that are as accurate as possible in terms of location – although we *display* records at tetrad level, we would rather they are collected at a site or monad level.

Rare Hoverfly in Shropshire

Nigel Jones

The hoverfly *Cheilosia semifasciata* mines the leaves of Navelwort *Umbilicus rupestris*. This hoverfly is a considerable rarity in the UK. Since 2000, it had only been recorded at eight locations, all in North Wales. However, in June 2006, much to my excitement, I discovered larvae of *C. semifasciata* in woodland near Haughmond Abbey (SJ5415). (See the back cover for a photo.) Following this discovery, I alerted Alex Lockton to the possibility of finding it in *U. rupestris* at other county locations. Alex e-mailed me back the very next day, to tell me that he had been out that morning and had already found a colony near Pontesford Hill (SJ4105)! Subsequently I found a third colony at Lee Brockhurst (SJ5426). It seems very likely that *C. semifasciata* could be well established in Shropshire, and indeed the county may even be a stronghold for the species in the UK. So, I am asking Shropshire botanists to help us to discover more about the distribution of this rare hoverfly in Shropshire.

What to look for: if it is present, it is easy to find *C. semifasciata*. During May and early June look for stands of *U. rupestris* under trees, which seem to be preferred. Search for leaves with dull or darkened looking blotches. I have found that where the larvae are present, the mined leaves are quite obvious, as they contrast markedly with the normally shiny surface of unaffected leaves. Often, if you peel open an affected leaf you will find maggot-like larva. This will be the larva of *C. semifasciata*. Beyond mid-June, very wilted or completely devastated stands of *U. rupestris* underneath trees will also indicate the presence of *C. semifasciata*, so even if you do not find larvae, your record will be of value.

There are extensive areas of *U. rupestris* at Earl's Hill, so I fully anticipate finding *C. semifasciata* at this site. *U. rupestris* occurs at many other Shropshire sites, most of which I cannot hope to get around, so please do take a closer look at any stands you come across in 2007. If you do find evidence of *Cheilosia semifasciata* I will be very grateful to receive a note of what you have found.

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New Records

❖ At Brown Moss (SJ5639) Dan Wrench found the liverwort *Fossombronia foveolata* Lindb. (Pitted Frillwort) on 17th September 2006 (det. T.H. Blackstock, BBSUK), which is a new species for the county.

❖ John Clayfield found a hybrid violet, *Viola* ×*bavarica* Schrank (*V. reichenbachiana* Jordan ex Boreau × *riviniana* Reichb.) in Plowden Woods (SO384865, conf. C. O'Reilly, BIRM) on 4th May 2006. This is only the second record for the county, the other being by Doris Pugh and Peter Benoit at Craig Sychtyn (SJ2325) in 1979.

❖ Dave Earl made several new and interesting finds of brambles in 2006, including:-

Rubus calvatus Lees ex Bloxam at Goldstone Common (SJ6929) on 16th July 2006. This is apparently the first record for over 100 years of a species that is not rare in the region, although it is endemic to Britain.

Rubus silurum (Ley) Ley, at Cefn Coch (SJ2432), Bwlch (SJ2529), Oswestry Racecourse (SJ2530) and Pant-glas (SJ2632). This is listed in the 1957 Handlist of the Shropshire Flora, by Lloyd & Rutter, without details.

Rubus rossensis Newton, a first county record at Haughmond Hill (SJ54041358) on 9th July 2006.

Rubus painteri Edees, first county records at Goldstone Common (SJ6929 & SJ7028) on 16th July 2006.

Rubus infestus Weihe ex Boenn at Haughmond Hill (SJ5414) and Steel Heath (SJ5436) on 16th July. We have no other records of this species, but there is at least one dot for Shropshire in the BSBI Bramble Atlas (Newton & Randall 2004).

Rubus intensior Edees at Cobscott (SJ6838), Betton (SJ6839), Norton in Hales (SJ6940), Goldstone Common (SJ7028) and Ercall heath (SJ6823) on 16th July; new to the county.

❖ The hybrid willowherb *Epilobium* ×*vicinum* Smejal (*E. ciliatum* Raf. × *obscurum* Schreb.) was collected at Brown Moss (SJ562394) by Quentin Groom on 17th September 2006 (conf. G.D. Kitchener, BIRM). The only previous records were by Geoffrey Kitchener at Eaton Manor Farm SO5089) in 2003.

❖ Geoffrey Halliday collected a plant of Rough-stemmed Goldenrod, *Solidago rugosa* Miller, from a wall in Ironbridge (SJ6703) on 14th August 2006 (det. D.R. McKean, E). This is a first county record.

❖ In the autumn 2006 newsletter we reported that the old records of *Carex* ×*pseudoaxillaris* K. Richt. (C. otrubae Podp. × *remota* L.) should be considered unconfirmed due to the lack of vouchers, but the digitization of the Shrewsbury School herbarium (SHYB) has revealed a specimen for the record made on 22nd June 1897 by Edward Cleminshaw and John Bishop Duncan by the Leominster Canal near Neen Sollars (SO6670), which therefore should be considered the first validated county record.

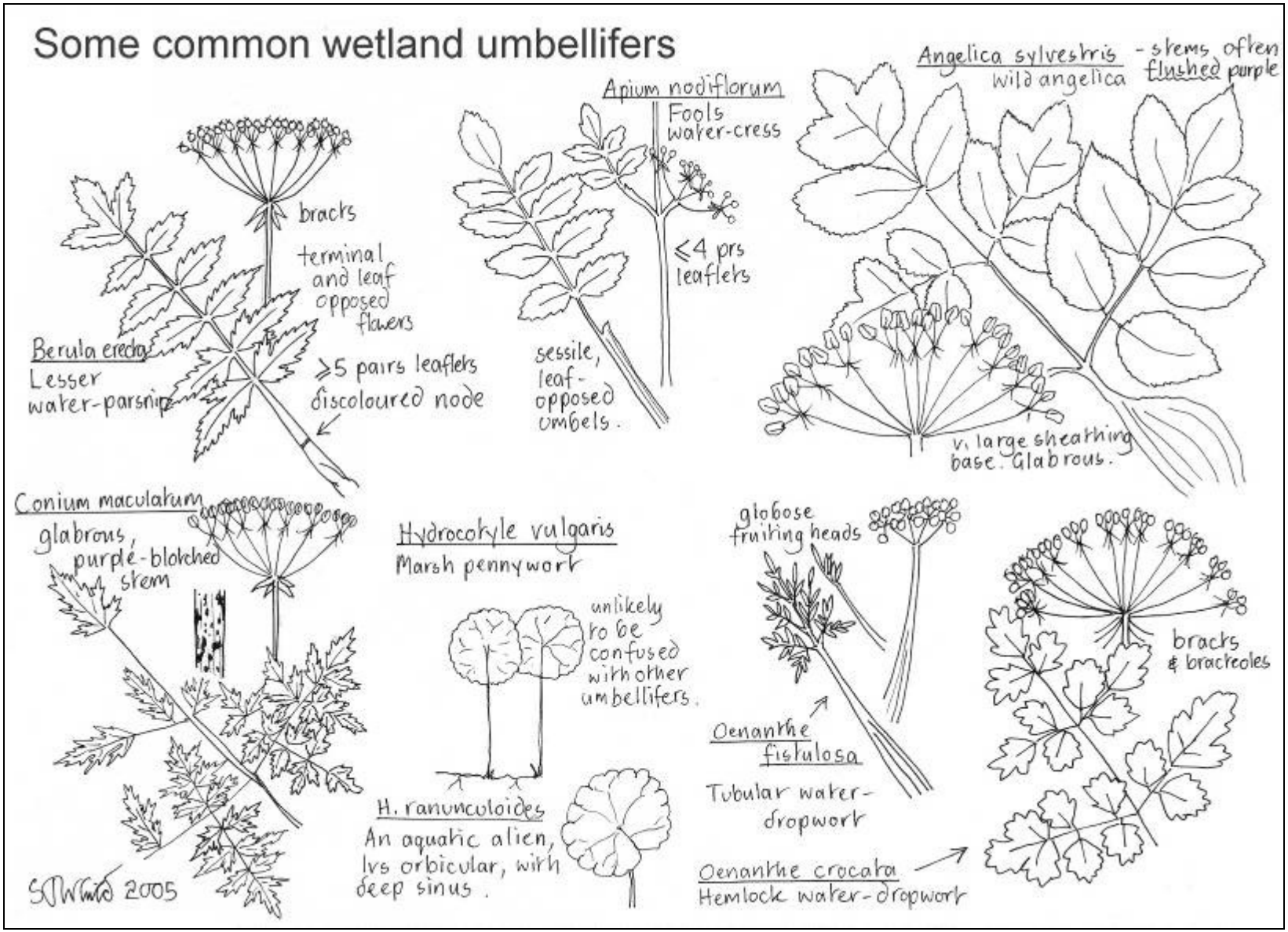
Field Meetings

Sarah Whild

Field meetings may be cancelled at short notice. To book onto a meeting and confirm that it is taking place, please phone me (01743 343789) or email me S.J.Whild@bham.ac.uk.

I can't guarantee good weather so bring waterproofs and a packed lunch, hand lens and field guide. The meetings are often a combination of recording and identification training, and some are specifically for training purposes. Beginners are welcome to ALL meetings! If you get lost or delayed en route, my mobile number is 07885 700368.

Saturday 24th March	Annual General Meeting at Preston Montford Field Centre. The AGM starts at 2.00 and is followed by a talk on 'Arable Weeds – species of conservation concern or alien invaders?
Sunday 20th May	Hope Bowdler. Meet at 11.00am in the lay-by at the foot of Hope Bowdler at SO474924 on the B4371 (off the A49 at Church Stretton). We will look for the remains of spring ephemerals and other upland species. This will be quite a long circular walk, so walking boots are advised.
Wednesday 6th June	Recording Plants – a Guide for beginners and improvers, with Sarah Whild. How to record, filling in a card, use a flora, prepare a voucher specimen, and much more. A day at The Gateway, Shrewsbury – you MUST book on this by contacting Pete Boardman on 01743 852119 or emailing him at pete@field-studies-council.org.
Saturday 9th June	FISQ (Field Identification Skills Qualification) at Preston Montford. There is a charge for this but if you are interested in taking this, please contact me by email.
Sunday 10th June	Llynclys Common. Meet in Turners' Lane lay-by (SJ278241) at 11am. We will look for some of the specialities of the common such as Lesser Butterfly Orchid and Pale St. John's-wort.
Saturday 4th August	BSBI Bog Plants Training Day. A day on Whixall Moss to learn your bog plants. As this is a BSBI outing, please book formally with me (Sarah) by either emailing S.J.Whild@bham.ac.uk or sending an SAE (see front of newsletter for my address).
Monday 6th August	FISQ (Field Identification Skills Qualification) at Preston Montford. There is a charge for this but if you are interested in taking this, please contact me by email.
Sunday 26th August	Brown Moss Rare Plants Monitoring Day. Meet at Brown Moss main car park (SJ5639), marked on the 1:50,000 OS map at 11.00am. Bring lunch, wellies if you want to see aquatic plants and a notebook or clipboard. There will be ID training and we will attempt to map locations of some of the Brown Moss specialities.
Saturday 15th December	Winter Meeting at Preston Montford.


Some common wetland umbellifers
Angelica sylvestris - stems often flushed purple
wild angelica
Apium nodiflorum
Fools water-cress
bracts
terminal and leaf opposed flowers
≤4 prs leaflets
Berula erecta
Lesser water-parsnip
≥5 pairs leaflets
discoloured node
sessile, leaf-opposed umbels.
vi large sheathing base. Glabrous.
Conium maculatum
glabrous, purple-blotched stem
Hydrocotyle vulgaris
Marsh pennywort
unlikely to be confused with other umbellifers.
globose fruiting heads
bracts & bracteoles
Oenanthe fistulosa
Tubular water-dropwort
H. ranunculoides
An aquatic alien, lvs orbicular, with deep sinus.
Oenanthe crocata
Hemlock water-dropwort
SJW Wild 2005

More about axiophytes

Alex Lockton

An axiophyte is a 'worthy plant' – a species that indicates that the habitat in which it is growing is important for conservation. It is easy enough to decide what constitutes an indicator species for a particular habitat: in essence, it is any plant that is generally restricted to that habitat. It is more difficult to decide which habitats are in need of conservation, but the guiding principle is usually along the lines of rarity and threat. If we've lost 95% of some habitat or other, it is often high on the list of conservation priorities.

The interesting thing about having a list of axiophytes is that it focuses the attention on the plants that say the most about the environment in which they grow. About a third of all plants in any particular area are ubiquitous – you will find them in any site if you look carefully enough, and they will still be there ten years later. Another third are colonisers, on the increase and ready to exploit any new site they happen to arrive in. The remaining third, approximately, are the axiophytes: restricted to certain habitats, generally in decline, and indicative of old and interesting vegetation communities. It is never quite as simple as that, because indicators of low-nutrient water bodies, for example, can be good colonisers, but the general principle is fairly straightforward.

We have found that about 40% of the native plant species in Shropshire can reasonably be classed as axiophytes of habitats that are considered important in the Biodiversity Action Plan. The process for selection is to examine the species in question, to ensure that it is indeed restricted to a BAP habitat. Ideally, 90% of the time it should occur in a target habitat. It will also probably be quite rare – in less than about 25% of tetrads in the county – but not too rare: species with just one or two sites are effectively randomly distributed, and it is impossible to demonstrate that they are correlated to a habitat type. So this combination of a decline, scarcity and habitat specificity make for a good axiophyte.

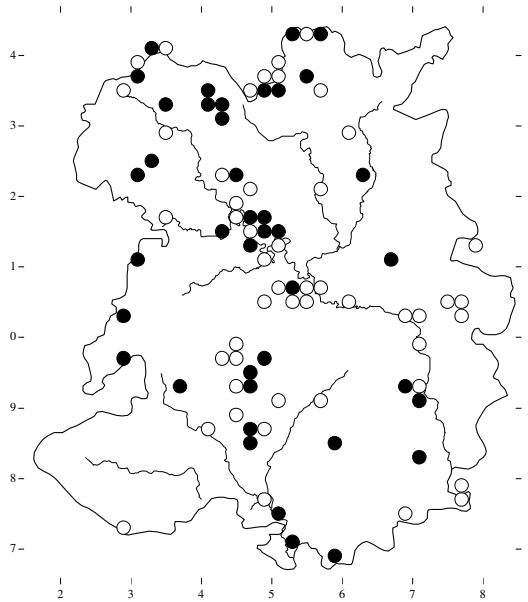
Ideally, for each species we should draw up a species profile to describe the ecological significance of each axiophyte. A couple of examples are given below.

Axiophyte profile: Yellow Loosestrife, *Lysimachia vulgaris*

The Shropshire Flora database holds 222 records of this species, of which 156 have named sites and the remaining 66 are simply for tetrads (although 16 of those are for tetrads where there is also a named site).

Of the 156 records with sites, 149 could reliably be assigned to identifiable habitats: 2 in canals; 121 on meres and mosses; 17 on river banks or in the floodplain; 4 are in woods not associated with mosses; 2 are in meadows; 2 were clearly planted; and 1 was in a quarry (although there is some doubt about the identification). Thus, 92% of the time this species is found either in the Meres & Mosses or along a river. It is rarely if ever found in secondary habitat such as quarries and farmland ditches, so any occurrences of it in such places would bear investigation.

- *Lysimachia vulgaris* in Shropshire -



It has been recorded in 89 of the 900-or so tetrads in Shropshire, which is about 10%, and it does seem to have become much more restricted in its distribution over the last 100 years or so, suggesting that it does not colonise

new sites well. Nationally, it is widespread but patchy in distribution England but absent from parts of Wales and much of Scotland. It is listed in the New Atlas as spreading, and is described by John Richards as readily colonising suitable new sites, which seems to be at odds with its behaviour in Shropshire.

Lysimachia vulgaris could be considered an axiophyte of relatively natural river systems and peaty wetlands in Shropshire. When found outside these habitats care needs to be taken to distinguish it from the often-planted *Lysimachia punctata*.

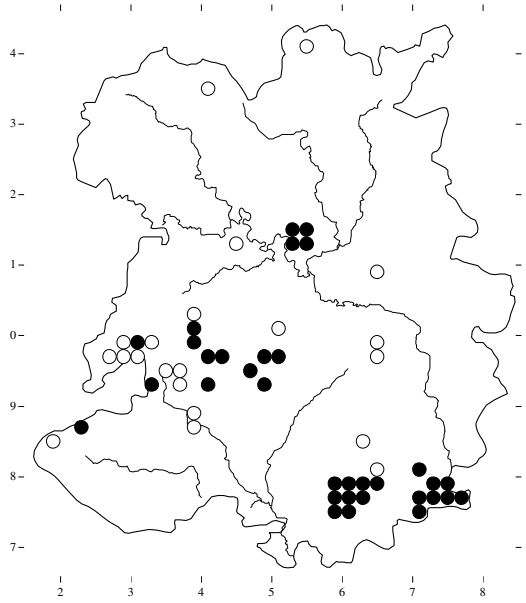
Axiophyte profile: Lesser Skullcap, *Scutellaria minor*

The Shropshire Flora database holds 145 records of this species, of which 116 have named sites and the remaining 29 are simply for tetrads (although 19 of those are for tetrads where there is also a named site).

All of the 116 records with sites could be assigned to identifiable habitats: 107 of them are flushes or streams on acid hills, 6 are other habitats in acid woods, and 3 records relate to lowland mosses (all in the 19th century). There are no records of it in anything other than a semi-natural habitat, although in some cases it is recorded in ditches by forestry tracks and in one case by an artificial pond along a stream in the Wyre Forest. Therefore 100% of its localities are BAP habitats, including semi-natural woodland, upland flushes and (in the past) lowland mires. If you compare this map with the one in Sinker's Flora, *Scutellaria minor* appears to be increasing in Shropshire, but that is because some of the older records were excluded from the Flora (possibly because of doubts about their veracity). In reality it has contracted its range somewhat over the last century or so. It is an oceanic species, with strongholds in the southwest of Britain & Ireland, but it extends as far north as the Outer Hebrides. It has declined significantly in the Midlands and the populations in Shropshire are now on the edge of its range.

Scutellaria minor could be considered an axiophyte of peaty upland flushes in Shropshire, often persisting in woodland. It has probably gone from the Meres & Mosses, and its loss from some sites indicates deterioration of open wetland habitats there.

- *Scutellaria minor* in Shropshire -



What can we do with axiophytes?

One particular use of axiophytes is for assessing and monitoring the conservation value of a site. With our present list of 392 species, you can expect to find at least 50 in a SSSI and at least a dozen in a County Wildlife Site. The sites on limestone tend to stand out as having more axiophytes, but then they have more species generally. If you then examine the habitats that are indicated, it is not difficult to see which are best peat bogs, for example, even though the number of species is smaller.

Once the axiophytes in a site are known, they can be monitored for changes in abundance in the same way that rare plants are monitored. If some species are in decline, or disappear altogether, it is possible to change the management regime before all the ecological interest is gone. Therefore it is useful to estimate the abundance and record accurately the location of all axiophytes, in the same way as we do for rare species.

It is a system that seems to have worked well so far, in our recent Floras of Attingham Park and Haughmond Hill. The next experiment is to be on the Stiperstones…

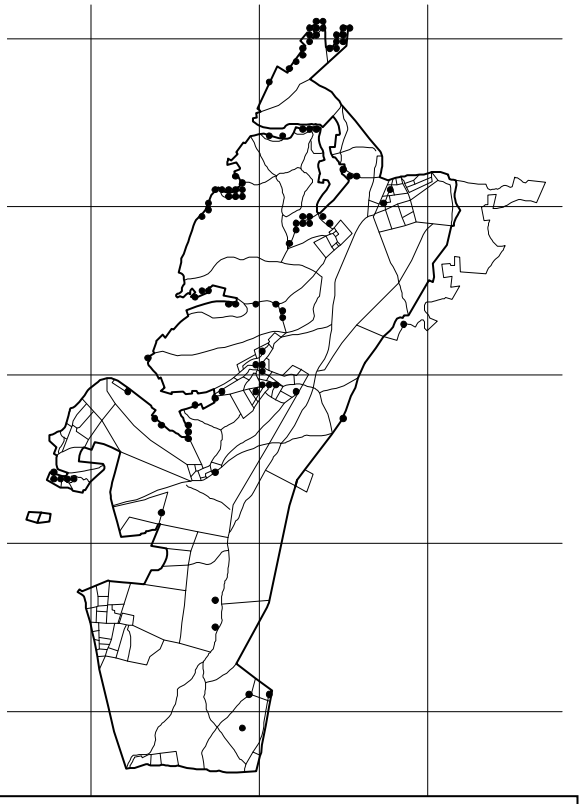
The Flora of The Stiperstones

Alex Lockton & Sarah Whild

The Site Flora project for this year is to be on The Stiperstones, a National Nature Reserve owned and managed by Natural England. As in previous years, we will not stick rigidly to the current reserve boundary, but will survey the hills more generally, looking for the areas of highest botanical and ecological interest. Our survey area will be from Maddox's Coppice in the north to Black Rhadley at the south end of the range. The aim of the Site Flora, as previously, is to find as many as possible of the plant species that occur there, in order to be able to detect changes over the years.

The Site Floras are run as a course at the University of Birmingham, but members of the Botanical Society are welcome to contribute records and take part in the survey if they are interested. Most of the field trips are simply organised by people involved in the project, on their own initiative. It takes upwards of thirty visits to be reasonably confident of finding all the species even in a smallish site, so we need as many people in the field as we can get.

One problem with The Stiperstones is that it has few rare species. As an area of acid moorland, it is the habitat that is of most importance, and it is quite difficult to say what is important about it from the botanical point of view. The solution, of course, is to use the axiophytes, of which there are many. The list below gives all those that have been recorded in the vicinity of The Stiperstones over the last quarter of a century. There are plenty of interesting species that we should search for. It is interesting to note that there are quite a few calcicoles in the list, some of which grow on old buildings or on mine waste, as well as the expected calcifuge species.



Distribution of *Dryopteris filix-mas* on The Stiperstones, using a 10m grid.

For each species of axiophyte, we will need detailed records including accurate grid references and notes on abundance. Some, like Crowberry and Cowberry, are too widespread for this treatment, so we will have to devise an appropriate scale at which to record them (possibly 1km squares). However, even widespread species can be recorded very accurately, as shown on the map here, which shows the distribution of one of the monitored fern species within the NNR.

Provisional list of axiophytes on The Stiperstones

Lycopodium clavatum, Stag's-horn Clubmoss
Equisetum sylvaticum, Wood Horsetail
Ophioglossum vulgatum, Adder's-tongue
Botrychium lunaria, Moonwort
Oreopteris limbosperma, Lemon-scented Fern
Gymnocarpium dryopteris, Oak Fern
Polystichum setiferum, Soft Shield-fern
P. aculeatum, Hard Shield-fern
Dryopteris affinis, Scaly Male Fern
D. carthusiana, Narrow Buckler-fern
Blechnum spicant, Hard Fern
Anemone nemorosa, Wood Anemone
Ranunculus omiophyllus, Round-leaved Crowfoot
Ceratocapnos claviculata, Climbing Corydalis
Ulmus procera, English Elm
Cerastium semidecandrum, Little Mouse-ear
Moenchia erecta, Upright Chickweed
Dianthus deltoides, Maiden Pink
Hypericum pulchrum, Slender St. John's-wort
H. elodes, Marsh St. John's-wort
Drosera rotundifolia, Round-leaved Sundew
Viola reichenbachiana, Early Dog-violet

V. palustris, Marsh Violet
V. lutea, Yellow Mountain Pansy
Salix pentandra, Bay Willow
S. ×*meyeriana,* Shrewsbury Willow
S. ×*smithiana,* Silky-leaved Osier
S. ×*multinervis,* Grey Eared-willow
S. aurita, Eared Willow
Cardamine amara, Large Bitter-cress
Lepidium heterophyllum, Smith's Pepperwort
Empetrum nigrum, Crowberry
Erica tetralix, Cross-leaved Heath
E. cinerea, Bell Heather
Vaccinium oxycoccos, Cranberry
V. vitis-idaea, Cowberry
V. ×*intermedium,* Hybrid Bilberry
V. myrtillus, Bilberry
Hottonia palustris, Water-violet
Anagallis tenella, Bog Pimpernel
Sedum forsterianum, Rock Stonecrop
Saxifraga granulata, Meadow Saxifrage
Chrysosplenium alternifolium, Alternate-leaved Golden-saxifrage
Potentilla palustris, Marsh Cinquefoil
Alchemilla filicaulis, Lady's-mantle
Prunus padus, Bird Cherry
Lathyrus linifolius, Bitter-vetch
Trifolium campestre, Hop Trefoil
Genista tinctoria, Dyer's Greenweed
G. anglica, Petty Whin
Lythrum portula, Water Purslane
Daphne laureola, Spurge-laurel
Circaea ×*intermedia,* Upland Enchanter's-nightshade
Euonymus europaeus, Spindle
Euphorbia amygdaloides, Wood Spurge
Linum catharticum, Fairy Flax
Polygala serpyllifolia, Heath Milkwort
Oxalis acetosella, Wood-sorrel
Geranium columbinum, Long-stalked Crane's-bill
Sanicula europaea, Sanicle
Pimpinella saxifraga, Burnet-saxifrage
Gentianella campestris, Field Gentian
Menyanthes trifoliata, Bogbean
Anchusa arvensis, Bugloss
Myosotis secunda, Creeping Forget-me-not
M. discolor, Changing Forget-me-not
Stachys officinalis, Betony
S. palustris, Marsh Woundwort
Lamiastrum galeobdolon, Yellow Archangel
Lamium hybridum, Cut-leaved Dead-nettle
Galeopsis speciosa, Large-flowered Hemp-nettle
Scutellaria minor, Lesser Skullcap
Plantago media, Hoary Plantain
Veronica montana, Wood Speedwell
V. scutellata, Marsh Speedwell
Melampyrum pratense, Common Cow-wheat
Euphrasia officinalis agg., Eyebright
E. arctica, an eyebright
Rhinanthus minor, Yellow-rattle
Pedicularis palustris, Marsh Lousewort
P. sylvatica, Lousewort
Jasione montana, Sheep's-bit
Galium odoratum, Sweet Woodruff
G. uliginosum, Fen Bedstraw
Adoxa moschatellina, Moschatel
Valeriana dioica, Marsh Valerian
Succisa pratensis, Devil's-bit Scabious
Crepis paludosa, Marsh Hawk's-beard
Hieracium cinderella, a hawkweed
Pulicaria dysenterica, Common Fleabane
Solidago virgaurea, Goldenrod
Achillea ptarmica, Sneezewort
Butomus umbellatus, Flowering Rush
Triglochin palustre, Marsh Arrowgrass
Potamogeton polygonifolius, Bog Pondweed
Juncus foliosus, Leafy Rush
Luzula pilosa, Hairy Wood-rush
L. sylvatica, Great Wood-rush
L. multiflora, Heath Wood-rush
Eriophorum angustifolium, Common Cottongrass
E. vaginatum, Hare's-tail Cottongrass
Eleocharis quinqueflora, Few-flowered Spike-rush
Carex paniculata, Greater Tussock-sedge
C. echinata, Star Sedge
C. rostrata, Bottle Sedge
C. panicea, Carnation Sedge
C. laevigata, Smooth-stalked Sedge
C. binervis, Green-ribbed Sedge
C. hostiana, Tawny Sedge
C. viridula ssp. *oedocarpa,* Common Yellow Sedge
C. pallescens, Pale Sedge
C. pilulifera, Pill Sedge
C. pulicaris, Flea Sedge
Milium effusum, Wood Millet
Briza media, Quaking-grass
Melica uniflora, Wood Melick
Trisetum flavescens, Yellow Oat-grass
Deschampsia flexuosa, Wavy Hair-grass
Aira caryophyllea, Silver Hair-grass
A. praecox, Early Hair-grass
Danthonia decumbens, Heath-grass
Molinia caerulea, Purple Moor-grass
Narthecium ossifragum, Bog Asphodel
Hyacinthoides non-scripta, Bluebell
Allium ursinum, Ramsons
Epipactis helleborine, Broad-leaved Helleborine
Platanthera chlorantha, Greater Butterfly-orchid
Dactylorhiza maculata, Heath Spotted-orchid
D. praetermissa, Southern Marsh-orchid
Orchis mascula, Early-purple Orchid
O. morio, Green-winged Orchid

List of members

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Nigel Jones

Cheilosia semifasciata on *Umbilicus rupestris*